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## Non-Conceptual Content and the Subjectivity of Consciousness

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# Non-Conceptual Content and the Subjectivity of Consciousness

*Tobias Schlicht*

## Abstract

The subjectivity of conscious experience is a central feature of our mental life that puzzles philosophers of mind. Conscious mental representations are presented to me as mine, others remain unconscious. How can we make sense of the difference between them? Some representationalists (e.g. Tye) attempt to explain it in terms of non-conceptual intentional content, i.e. content for which one need not possess the relevant concept required in order to describe it. Hanna claims that Kant purports to explain the subjectivity of conscious experience in this way. This paper examines this claim in some detail in the context of a more general criticism of this kind of attempt to explain subjectivity and proposes a different reading of Kant that also leads to an alternative account of subjectivity independent from content.

**Keywords:** phenomenal consciousness; non-conceptual content; representationalism; Kant; unity of consciousness

Two major topics have been extensively discussed in the Philosophy of Mind recently. The first is the subjectivity of conscious experience. We distinguish conscious from unconscious mental phenomena. What is the difference? Which feature is responsible for a mental event's being phenomenally experienced from a first-person perspective? What is this feature that merely subliminal mental processes and events lack? The second major topic concerns the existence, nature and cognitive significance of non-conceptual content. Is all content conceptual or propositional or do we have to posit non-conceptual content in order to explain certain phenomena? If we do, then how should we characterize this notion? What might a positive definition amount to – in contrast to the merely negative one contrasting it with conceptual content? These two separate discussions converge on the question whether the subjectivity of conscious experience can be explained in terms of non-conceptual content. Can we explain the difference between conscious and unconscious mental events in terms of a certain form of non-conceptual content? This is the topic of this paper. In the first section, the

explanandum will be characterized in more detail, namely the subjective character of phenomenal consciousness. In the second part, the representationalist approach to phenomenal consciousness is introduced and situated in the broader context of theories of consciousness. Then we will have a critical look at one particular and quite popular characterization of non-conceptual content, introduced by Michael Tye (1995), put forward as a putative explanation of the subjective character of phenomenal consciousness. The fourth part is devoted to a more recent characterization of non-conceptual content developed by Robert Hanna (2005) on the basis of his exegesis of Kant's *Critique of pure reason* (Kant 1781/87). The final section sketches an alternative to such approaches on the basis of a more general attack on explanations of subjectivity in terms of content.

### 1. Phenomenal Consciousness

Although 'consciousness' is a 'mongrel concept' (Block, 1995), applied in different ways and referring to various phenomena, which have to be distinguished from one another, it is generally agreed that the subjective or first-person character is the essential aspect of conscious experiences. It is often referred to by the notion of 'phenomenal consciousness', introduced by Ned Block (1995), and typically characterized in terms of Thomas Nagel's (1974: p. 436) popular phrase, according to which 'the fact that an organism has conscious experience *at all* means, basically, that there is something it is like to *be* that organism'. This central notion of consciousness can both be applied to creatures and to the token mental states that they undergo. A creature is phenomenally conscious if it has an experiential point of view and if there is something that it is like subjectively to *be* that creature.<sup>1</sup> In addition to a creature's being phenomenally conscious we also speak of a token experience being phenomenally conscious or unconscious. An individual mental state or experience may be regarded as phenomenally conscious if and only if there is something it is like for an organism to *be* in that state (or to *have* the experiential state in question), i.e. if the state is something *for* the organism. Nagel's formulation suggests a connection between a token state's being conscious and an organism's point of view: for a mental state to be a conscious experience is to be experienced by a subject of experience. Typical examples of such experiences are sensations like pain and perceptual experiences, visual or auditory experiences say. Such experiences exhibit *phenomenal character* and are experienced from a first-person perspective. In order to zoom in on the target feature of consciousness that this paper is about, we may analyse the phenomenal character into two aspects (following Kriegel, 2005):

we can individuate conscious experiences and distinguish them from one another in virtue of their *qualitative character*. The way it is for me to taste red wine is different from the way it is for me to taste a lemon or to suffer from a toothache. A lot of work on consciousness addresses this aspect (qualia), but this is not what this paper is about. For, in addition, all conscious experiences share a common feature, which we may call their *subjective character*: I experience them from a first-person perspective, they are something *for me* and present themselves as mine. The *subjective character* is what savoring red wine, tasting a lemon and suffering from a toothache have in common, namely, the fact that they are all *my* conscious experiences. As Ned Block (1995: p. 390) put it, phenomenally conscious states have a ‘me-ishness’ about them. This me-ishness is essential for phenomenal consciousness and it is constitutive of something’s being a conscious experience at all. Thus, the question arises: what is responsible for a mental representation’s being something for me, i.e. what conditions have to obtain in order for some mental phenomenon to exhibit subjective character? This question has to be answered since not all mental phenomena are conscious in this sense, and it may require a different answer than the question of what is responsible for an experiences’ qualitative character. Even though it may be controversial whether bodily sensations like pain can be unconscious or whether they are essentially conscious (Kripke, 1972), most people would agree that at least perceptions and propositional attitudes like beliefs and desires can both be conscious or unconscious. In the case of perceptions, for example, it has been shown that information may be processed in the brain, having causal effects on linguistic and motor behavior, without being consciously experienced. For example, patients suffering from the condition of blindsight (as a consequence of a lesion in primary visual cortex) do not visually experience stimuli presented in their left visual field. They constantly deny that they see anything. But if forced to guess which specific stimulus is presented, their performance is very much above chance (Weiskrantz, 1986). This suggests that visual information about the stimuli has been processed in the relevant brain regions although this processing does not result in a phenomenally conscious experience. Such subliminal perception has not only been discovered in pathological conditions like blindsight and in split-brain patients (Sperry, 1968); priming effects have shown that it is a pervasive phenomenon in healthy subjects as well (e.g. Marcel, 1983). And of course, unconscious beliefs and desires are a commonplace since Freud’s influential work. These phenomena show that for a mental state to be conscious – to be something *for* the subject – one or more conditions have to be met in addition to mere information processing. At least it must be information processing of a peculiar kind.

## 2. Subjective Character – Some Theoretical Options

Since consciousness is a mongrel concept, not all theories of consciousness are theories of the same thing and not all of them make claims regarding the subjective character constitutive of phenomenally conscious experiences. But various philosophical theories have been put forward specifically intended to target this explanandum. This section provides a map of some theoretical options in order to situate the more specific discussion in the next sections. A coarse distinction separates functionalistic approaches from physicalistic approaches (Block, 2001). Proponents of functionalism characterize mental phenomena in terms of their causes and effects and emphasize their functional role in the overall cognitive make-up of the system in question, while the concrete implementation of this functional architecture is largely neglected (Dennett, 1991). Physicalists on the other hand emphasize the nature of the broadly physical basis underlying the mental. In the case of human beings these are the neural correlates of consciousness (Metzinger, 2000). Many of the views found in the literature can be subsumed into either one of these categories.

Popular and widely discussed functionalistic theories are versions of first-order and higher-order representationalism. According to *representationalism* in general, a mental state's being phenomenally conscious is a matter of it having a certain form of intentional content where this content must play a specific functional role. Quite a number of philosophers attempt to explain phenomenal consciousness in this way by analysing it in terms of the notion of intentionality. Why? I think the main motivation for these views is *hope*. Since proponents of such views are generally naturalists of some sort, they need to provide an account of consciousness and intentionality showing how they fit into the natural world. Thereby they hope to be able to reduce two mysteries to one, if they can explain consciousness in terms of intentionality and explain consciousness without invoking 'qualia' as irreducible intrinsic properties of experience. As a corollary (and precondition of their first hope), they also hope that intentionality can be explained independently of consciousness and more easily in naturalistic terms. Of course all these claims can be doubted. Just as it can be questioned that intentionality is totally independent from consciousness (e.g. Searle, 1992; Horgan and Tienson, 2002, Strawson, 2008), it may also be doubted that phenomenal consciousness can be analysed exhaustively in terms of intentionality. The various versions of representationalism differ with respect to what has to be represented, i.e. what the right kind of content is supposed to be. Not all of them rely on the notion of non-conceptual content. In the following, various positions will be sketched in order to single out the ones relevant for the discussion in this paper.

According to *first-order representationalism*, a mental event is phenomenally conscious (is something *for* the subject), if and only if it represents its object in the right kind of way.<sup>2</sup> For example, according to Michael Tye's (1995) PANIC-theory, a representation has to meet the following conditions: it has to have an Intentional Content, which is (a) Poised, (b) Abstract, and (b) Non-conceptual. Thus, the blindsight patient's perceptual state remains unconscious precisely because its content is not poised for further use in thought and reasoning etc. Tye's theory is discussed in more detail in the next section (other versions of this theoretical option are defended by Dretske, 1995; Byrne, 2001b, and Crane, 2001, among others, all differing in aspects which need not concern us here).

According to *higher-order representationalism*, merely representing something in the right way does not suffice for a mental state's being consciously experienced. In addition, the first-order state needs to be represented by a further and distinct mental state. Some consider this higher-order state to be perceptual (Lycan, 1996), others demand that it be a conceptual thought (Rosenthal, 2004) or at least a potential thought (Carruthers, 2000) to the effect that one is in that state in question. Thus, the common idea among these proposals is that consciousness is tied to a form of self-awareness since only those representations are regarded as conscious that the subject is aware of being in. Since consciousness and self-consciousness come in different degrees and complexities, it has to be specified which form of self-awareness is involved here. Thus, having a phenomenally conscious perception of a triangle requires being in two separate mental states, a first-order representation of the triangle and a higher-order state representing or being directed at this first-order representation. The higher-order state itself remains unconscious but is supposed to convey subjective character to the first-order state. On this view, the blindsight patient's perceptual state remains unconscious precisely because she lacks the relevant higher-order state.

A more recent development is the so-called *self-representationalism* defended by Kriegel (2009) and others. This view, which is based on prior work by Brentano (1973: pp. 127ff), moves the distinction of two states into the representational content of the mental state in question: this mental state is phenomenally conscious (is something *for* the subject) if it does not only represent its object but also *itself*. In addition to representing an object, which Brentano calls its *primary* object, a mental state needs to represent itself as its *secondary* object in order to be phenomenally conscious.

As mentioned above, these different options share the central feature of attempting to explain the subjectivity of consciousness in terms of a certain kind of content. Furthermore, they are typically construed as versions of functionalism, i.e. they add a condition that specifies a certain

causal or functional role to be played by that state. In the case of Tye's theory, this is the condition of being 'poised'.

In contrast to such broadly functionalist theories, versions of physicalism prefer a different and less abstract level of explanation since they attempt to explain conscious experience by determining its neural basis in the brain. Various proposals have been put forward, e.g. binding neural assemblies through 40 Hz oscillations (Crick and Koch, 1990) or integration of neural processes in the left hemisphere (Gazzaniga, 1988), based on findings from split-brain patients, recurrent processing (Lamme, 2006), and so on.<sup>3</sup> For the purposes of this paper, it suffices to merely mention this group of theories to contrast them with the target theories of this paper, namely those that attempt to explain subjective character in terms of content. In fact, the focus will be even smaller since we will be concerned with those theories that make essential use of the notion of *non-conceptual* content. Thus, we will not be concerned with the higher-order thought theory since the essential explanatory work is done by a conceptual thought. Therefore, in order to provide the necessary background, the next section introduces and motivates the notion of non-conceptual content.

### 3. Non-Conceptual Content as Spatiotemporal Structure

Introducing the notion of non-conceptual content usually proceeds by contrasting it with the notion of conceptual content or the thesis of 'conceptualism' about mental content. This is the claim that the content of perception is propositional and determined by our conceptual capacities (McDowell, 1994). As a corollary, only creatures possessing the relevant conceptual capacities can have perceptions with representational content. In contrast, 'non-conceptualism' about perceptual content holds that in addition to conceptual contents, there exists non-conceptual content which is also cognitively significant. The point is that it is supposed to be possible for us and other creatures to represent the world either without possessing conceptual capacities at all or without being able to apply one's conceptual capacities in a given situation. After Gareth Evans (1982) introduced the notion of non-conceptual content into modern analytic philosophy, it has been put to use to solve several otherwise unrelated problems and explain quite different phenomena. For example, in the context of perception it has been argued that our conscious perceptual states are so rich in phenomenal character that we cannot possibly bring to bear enough concepts to capture all this richness. For example, we can perceive and discriminate many more colours and hues than we can conceptually discriminate or re-identify (Raffman, 1995). A second argument in favor of accepting non-conceptual content comes from visual illusions that motivate the thesis that perceptions are not



judgements. For example, in the Müller-Lyer illusion, two lines of equal length appear to be of different length. And even when you know that they are of the same length and judge them to be so, your perceptual content presents them as being different. This (and other examples) shows that our perceptual content is somewhat independent from our judgement about it. Whereas judgements are always conceptual, cognitions that are not judgements have to be non-conceptual (cf. Crane, 2001). A third line of argument in favor of non-conceptual content starts from our intuition that human infants not yet in possession of the conceptual repertoire typical for adults, and certain nonhuman animals, which won't ever possess this repertoire, nevertheless have conscious perceptual states about their surroundings. Whereas they are not capable of perceiving some object *a* as an *F*, they can nevertheless perceive *a*.

These are only some strong motivations for accepting and developing a notion of non-conceptual content. Alas, it has proved difficult to spell out exactly what non-conceptual content is supposed to be. That is, most characterizations of non-conceptual content remain purely negative in that they define it merely in contrast to the positive notion of conceptual content (e.g. Tye, 1995). Such a definition of Non-conceptualism may hold that 'representational content is neither wholly nor solely determined by our conceptual capacities' (Hanna, 2009: p. 42) or that 'some mental states can represent the world even though the bearer of those mental states need not possess the concepts required to specify their content' (Bermudez and Cahen, 2008: p. 1). The negative character of those definitions results from the postulation of the mere absence of something, namely determination of content through conceptual capacities or possession of concepts. They are silent about what non-conceptual content is supposed to be or consist in. In several papers, Robert Hanna (2005), (2009) developed a viable notion of non-conceptual content, which is not merely characterized negatively and thus overcomes this deficit of prior characterizations. Referring to Speaks (2005: p. 360) Hanna defines the positive thesis of Non-Conceptualism in the following way:

[T]here exist perceptual mental contents, had by human and non-human animal cognizers alike, whose semantic structure and psychological function are distinct from the structure and function of conceptual content – or equivalently, that there exist . . . absolutely non-conceptual contents: A mental state has absolutely nonconceptual content iff that mental state has a different kind of content than do beliefs, thoughts, etc. (Hanna, 2009: p. 47)

That already points to a positive characterization. But what is absolutely non-conceptual content? In order to develop an answer, we have



to appreciate that there are different routes to non-conceptualism. According to Hanna, content non-conceptualism could be based on theories of (i) the *composition*, or construction, of mental content, (ii) the *compositional matter*, or stuff, of mental content, or (iii) the *formal constitution*, or structure, of mental content. Hanna rejects the first two options exemplified by Heck's (2000) and Tye's (2006) versions of Non-conceptualism respectively. Instead, he favors a third version according to which the *formal constitution or structure* of mental content is essential for Non-conceptualism, i.e. 'the non-conceptual content of a mental act or state must be formally constituted by egocentrically-centered intrinsic spatiotemporal structure' (Hanna, 2011: p. 338). What this means needs to be elaborated in more detail below. The first significant thing to note is that Hanna claims to find this characterization of non-conceptual content in Kant's *Critique of pure reason*, more specifically in Kant's theory of the forms of intuition, namely, our representations of space and time, which are supposed to '*constitutively explain* non-conceptual content' (Hanna, 2005: p. 278). More precisely: 'Non-conceptual content is *nothing but* cognitive content that is essentially structured by our a priori representations of phenomenal space and time' (ibid.). This may come as a surprise to the reader familiar with the way the discussion about non-conceptual content is typically framed, since Kant is usually invoked as chief witness by proponents of Conceptualism, such as McDowell (1994). According to Hanna, Kant is to be made responsible for both conceptualism and non-conceptualism while Kant himself defended the latter. Although interesting in its own right, the question whether McDowell's or Hanna's interpretation of Kant's position is right shall not be pursued any further in this paper.

What does Hanna's positive characterization of non-conceptual content amount to? What is the unique function of such content? He explains:

The forms of intuition constitute non-conceptual content by introducing designated intrinsic phenomenal spatial or temporal structures into all human or non-human sensibility, whose specific cognitive-semantic function it is to determine the empirical representation of individual material objects in real empirical space and real empirical time, by uniquely locating those objects. (Hanna, 2005: p. 282)

In short, the spatiotemporal structure organizes and pre-formats all perceptual content and locates perceived objects in space and time. Hanna claims that this positive notion of non-conceptual content can solve what he calls the 'unity problem', namely, the worry that there

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may not be one single phenomenon of non-conceptual content that can serve equally well in all contexts in which non-conceptual content is invoked. Indeed, Hanna mentions a variety of possible applications of non-conceptual content mentioned above, e.g. the phenomenological richness of perception, infant and non-human cognition, and the distinction between perception and judgment, among others (Hanna, 2011: p. 330f.). If Hanna's notion really does this job, then this would be a major achievement.

But according to Hanna it is not only that 'the conscious states of animals in their representations of material objects, whether human or nonhuman, are necessarily framed by the nonconceptual spatiotemporal phenomenal field' (Hanna, 2005: p. 282). Hanna makes an additional claim towards the end of his paper on 'Kant and non-conceptual content':

Even more precisely and radically, for Kant the designated formal intuitional spatiotemporal structure of non-conceptual cognitive content just *is* its subjective or "first-person" character. It is precisely an animal's unique non-conceptual spatiotemporal perspective or "point of view" that constitutes the subjective character of its objective experience, and not the "unity of consciousness" in the Kantian sense of a necessarily conceptual capacity for rationally self-conscious and proposition-based unification of a phenomenal manifold of sensory or representational content. (*ibid.*)

It is at this point that the debate about non-conceptual content converges with the debate about the subjective character of phenomenal consciousness as outlined in the beginning of this paper. Of course, as I indicated, Hanna is not the only one who claims that the notion of non-conceptual content can be put to use in this context. Michael Tye (1995, 2000) has made similar claims, based on a different notion of non-conceptual content.

With regard to Hanna's claim in the quote above we may ask several different questions:

- (1) Can subjective character be explained in terms of content?
- (2) Is this Kant's account of the subjective character of consciousness?
- (3) Is Kant's account persuasive?

In the remainder of this paper I would like to argue that the answer to all three questions is 'No'. The first point I wish to make is that although the notion of non-conceptual content may be applicable in a

variety of contexts, it cannot serve to explain the subjectivity or me-ishness of phenomenal consciousness, namely, the fact that there is something it is like *for me* to have a particular conscious experience. I consider not only Hanna's account but also Tye's (1995) so-called PANIC theory of consciousness (section 4). Of course, the second question is mostly of historical interest. But although I do not want to settle the question whether Kant was a conceptualist or a non-conceptualist, considering this different question will point us in the direction of an alternative account of subjectivity. Contrary to Hanna, I think that the notion of the 'unity of consciousness' *does* play a pivotal role for Kant with regard to the me-ishness of phenomenal consciousness while I don't think that Kant tries to explain subjectivity in terms of some form of content at all. Instead, Kant tries to explain me-ishness by a relational *property* that a contentful mental representation may either lack or possess (section 5). Nevertheless, since I happen to think that the answer to question 3 is also 'No', we need an alternative way to formulate the relevant condition for the subjectivity of phenomenal consciousness. The final section 6 provides a sketch of such an alternative, making use of empirical theories of consciousness to support it.

#### 4. Non-Conceptual Content and Subjectivity

In the second section I introduced representationalism as the view that all there is to a mental state being phenomenally conscious and thus being something *for the subject* of experience, is to possess the right kind of representational content. Of course, representationalists disagree about how this content is to be characterized. For the purposes of this paper we can focus on first-order representationalism as represented by Tye (1995), since the notion of non-conceptual content figures prominently in his account of phenomenal consciousness. A criticism of his account will provide us with the means to also evaluate Hanna's alternative proposal just mentioned.

##### 4.1. Don't PANIC

As sketched in the second section, Tye introduces the following conditions for a mental state's being phenomenally conscious: it has to have a (a) Poised, (b) Abstract, and (b) Non-conceptual Intentional Content. Although Tye's theory is very familiar, a few words about the elements of the acronym PANIC are in order. Representational content of conscious states being *abstract* means that a state's having representational content does not depend on there being any singular object that is presented to the subject. As might be the case in hallucinations or afterimages, no single object need be given in an experience of mere 'bluishness', say. As indicated above, the central idea behind the

assumption of *non-conceptual* content is that there may be ways of representing the world independent of the thinker's conceptual capacities. And one line of argument that Tye relies on stresses that the fineness of grain of our perceptual experiences outstrips the perceiver's conceptual capacities (Raffman, 1995). For example, we can discriminate many more colors, shapes or sounds perceptually than conceptually. Tye writes: 'The claim that the contents relevant to phenomenal character must be *non-conceptual* is to be understood as saying that the general features entering into these contents need not be ones for which their subjects possess matching concepts' (1995: p. 139). Correspondingly, a *state* is non-conceptual if and only if it has non-conceptual content. Note that Tye defines non-conceptual content negatively in terms of the lack or un-necessity of concepts. The quote above also reveals that Tye intends the equation 'Phenomenal character is PANIC' to be understood as *identifying* phenomenal character with a certain kind of content.

While the conditions of non-conceptuality and abstractness can be seen as pertaining to the content of a representation, the condition of *poise* 'is essentially a functional role one' (Tye, 2000: p. 62), pertaining to the representation as such. The functional role consists in the non-conceptual representation's being available to serve as input to our cognitive concept-applying system – an idea, which can be traced back to Evans (1982). By being further processed to conceptual mechanisms, the input is supposed to have a *direct*, i.e. immediate impact on the formation of cognitive states such as beliefs and desires (Tye, 1995: pp. 137ff). *Poised* representations are phenomenally conscious, while those not being available in this way remain unconscious. A state is *poised* iff it 'stand[s] ready and available to make a direct impact on beliefs and/or desires' (Tye, 2000: p. 62, cf. 1995: p. 138). A visual experience as of a tomato is poised, because it typically causes a belief about the tomato 'if attention is properly focused' (Tye, 2000: p. 62). However, earlier stages of visual processing that represent, say, 'changes in light intensity' are not poised: 'the information they carry is not directly accessible to the relevant cognitive centers' (*ibid.*). We can speak derivatively of poised contents: a content is poised iff it is the content of some poised state. For example, a representation of a triangle may become conscious and lead to the belief that there is a triangle, if it 'stands ready' in the right kind of way, but it may remain unconscious, for example in a blindsight patient, if it is not so available. Now, in order to evaluate Tye's theory, we need to explore whether these conditions can mark the difference between conscious and unconscious mental representations.

Let's first consider blindsight again. If the blindsight-patient is shown a triangle in her blind field, then the neural processing of the triangle-information in the patient's brain does not result in a conscious representation of the triangle. There is nothing it is like for the patient to

perceive the triangle. On Tye's account, this is so because the representation is not poised for the belief/desire-system. But if forced to guess what is presented in her blind field, a blindsight-patient forms a judgement which is true more often than false. And once she has formed the judgement that there is a triangle in her left visual field, say, it seems that the representation of the triangle did have 'an impact' on the relevant conceptual mechanisms, resulting in a conscious judgment, although the representation of the triangle remains unconscious. Yet there is still nothing it is like for her to perceive the triangle, despite her judgement that there is (or might be) one. Presumably, Tye would respond – as in his explanation of the imaginary case of super-blindsight – that the difference to a normally sighted subject lies in the fact that the impact of the representation is not 'immediate' but merely 'anomalous and indirect' (Tye, 1995: p. 143). So much can be granted, although this reply seems to be a little ad hoc, since the immediacy with which the representation feeds into a judgment seems to be the only difference between the two judgments of the normally sighted person on the one hand and the blindsight-patient on the other.<sup>4</sup> Tye would stress that the differences in content also play an important role, but then shouldn't we say that in the many cases in which the patients get it right, the relevant content being processed is (largely) the same as the content processed by normally sighted subjects? And isn't the content available after all when she forms a correct judgement?

Now, let's grant for the sake of argument that the difference between a *direct* impact on the belief/desire-system and a merely *indirect anomalous* impact marks a relevant difference. Still a case can be made against *poise* being a necessary and *sufficient* functional condition for phenomenality.<sup>5</sup> This case rests essentially on the striking empirical discovery of the anatomical and functional bifurcation of two visual pathways in humans and other primates (Ungerleider and Mishkin, 1982; Milner & Goodale, 1995). According to this 'two visual streams' hypothesis, vision serves two functions: (i) providing visual information for the conscious perception of objects, and (ii) processing visual information for the guidance of action. For example, I can *visually perceive* a cup of coffee standing on the table in front of me or I can simply *grasp* that cup of coffee with my hand in order to drink from it. The first case is just an example of conscious perception while the latter is an example for visual information guiding my grasping action. According to Milner and Goodale (1995), this functional bifurcation is mirrored and can be explained by an anatomical separation in the brain: the ventral pathway, culminating in the temporal lobe, processes information for the conscious identification of objects and thereby allows for object recognition and action-planning in the context of perceptual tasks. The dorsal pathway, on the other hand, projects to the parietal lobe and processes

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information about the location of objects in visual space and for the visual guidance of action such as grasping behaviour. Not only are these two functions realized by largely distinct brain areas, it has also been established that brain lesions in humans can result in a selective impairment of either function leaving the other intact. The astonishing hypothesis drawn from this discovery is that apparently only the visual representations produced by the ventral pathway lead to phenomenally conscious visual experiences while the processing of information for the guidance of action proceeds automatically and unconsciously.

Based on the vast amount of empirical evidence supporting this two-pathway-hypothesis, Jacob and Jeannerod (2003) argue for the distinction between two kinds of visual representation corresponding to the two different kinds of visual processing in the ventral and dorsal pathways respectively: *semantic processing* of a stimulus in the ventral pathway produces a non-conceptual *perceptual* representation serving as input for further cognitive processing by the 'belief-system', while *pragmatic processing* of a stimulus in the dorsal pathway results in a non-conceptual *visuomotor* representation standing ready as input for the 'intention-system', being processed to motor intentions for the guidance of visual actions such as grasping an object. The crucial difference between the kinds of processing and the respective representations is that the perceptual ones become phenomenally conscious while the visuomotor representations remain unconscious.<sup>6</sup> To illustrate this, consider patient D. F. – investigated by Milner and Goodale – suffering from the condition of 'visual form agnosia', leaving her largely impaired with respect to conscious visual perception. One of their tests involved the identification of the orientation of a slot:

[We] used a vertically mounted disc in which a [rectangular] slot ... was cut: on different test trials, the slot was randomly set at 0, 45, 90, or 135°. We found that D.F.'s attempts to make a perceptual report of the orientation of the slot showed little relationship to its actual orientation, and this was true whether her reports were made verbally or by manually setting a comparison slot. Remarkably, however, when she was asked to insert her hand or a hand-held card into the slot from a starting position an arm's length away, she showed no particular difficulty, moving her hand (or the card) towards the slot in the correct orientation and inserting it quite accurately. Video recordings showed that her hand began to rotate in the appropriate direction as soon as it left the start position. In short, although she could not report the orientation of the slot, she could 'post' her hand or a card into it without difficulty. (1995: p. 128)

In their explanation of this finding, Jacob and Jeannerod (2003) allude to the relevant visuomotor representation being available for the visual guidance of action. In virtue of this representation, D. F. can control her fingers and grip aperture adequately etc. The philosopher Sean Kelly interprets D. F.'s abilities in the following way:

In the case of D.F., the understanding of the orientation of the slot that she has in posting a card through it is not an understanding she can have independent of the posting activity. In particular hers is not the kind of understanding of orientation that she can report in any way other than by actually posting the card through the oriented slot. ... [S]he has a motor intentional understanding of orientation. (Kelly, 2002: p. 385)

Although D. F. can still see colors and textures, she can neither recognize the orientation nor the shape of an object such as the slot of the letter box. When asked to identify the orientation of the slot based on her visual experience, she is unable to produce an accurate report. But she has no problem when asked to post a letter through it, immediately moving her hand in the right position, demonstrating that her sensorimotor abilities are still intact. If this is right, then we should assume that the visuomotor representation is *poised* to have an *immediate* impact on the intention-system. And her immediate action suggests that this is so. Yet, as Kelly's observation shows, being poised in this way does *not* result in this representation's content being phenomenally conscious or being reportable by D. F.<sup>7</sup> The point of this empirical example is that although the relevant visual (or rather, visuomotor) representations processed here are both *poised* for action control and *non-conceptual*, they are not phenomenally conscious. Yet, according to Tye's PANIC theory this *poised* representational content should be experienced by D. F. As a way out of this dilemma, Tye may want to restrict *poise* to availability to the belief/desire-system. But this restriction seems ad hoc. Therefore, Tye's PANIC theory seems inadequate as an explanation of phenomenal consciousness, because here we have a case where content that meets the PANIC criterion remains unconscious. Together with the condition of blindsight, this example forces Tye's at least to recast his condition of *poise*. As it stands, it is not sufficient.

A final point can be made against Tye's account; it rests on the distinction between qualitative and subjective character of phenomenally conscious representations, introduced in the first section. In his criticism of Tye's PANIC-theory, Kriegel (2007) argues that even if it can account for qualitative character in terms of non-conceptual content, which may very well prove successful, it does not necessarily thereby account for



subjective character. This can be illustrated by emphasizing that Tye identifies the phenomenal character of a conscious experience with a kind of *content* instead of construing it as a *property* of the experience. A consequence of Tye's theory, as he explicitly points out (1995: p. 138), is that no conceptual representation such as a belief has 'phenomenal character', i.e. on his account there is nothing it is like to have a certain belief! This may sound odd at first since we all have conscious beliefs and desires. And arguably, believing that there is a lion standing in front of me differs from believing that a squirrel is standing in front of me. Tye's claim seems to be plausible only if the notion of phenomenal character is used in a narrow sense, restricted to qualitative character. Thus, it should be understood as the claim that there are no belief-qualia. Although there are good arguments to the contrary<sup>8</sup>, let's assume this is right. Then one can argue that while the PANIC-theory may be able to explain *qualitative character*, it does not thereby provide an account of *subjective character*, since the latter need not be explainable in terms of content at all. Tye does not independently motivate the claim *that* it should be so explainable. Indeed, the contrary is suggested by the fact that all kinds of contents may be either consciously experienced or remain unconscious. Why should we regard any specific content to be so special that it is essentially conscious?

If this is right, then subjective character may be better understood as a *property* that a mental representation can either lack or possess, namely, the property of being something *for* the subject. Indeed, although Tye emphasizes the non-conceptuality of the representational content, it seems that neither this nor the abstractness of the content do the explanatory work regarding the *subjective character* of a mental representation. Rather, the important feature of the PANIC theory is the *functional* condition of *being poised* for further use and this condition has nothing to do with content. To ask whether two experiences share the same *subjective* character is to ask why conscious representations present themselves in a self-related way; subjective character is what makes two qualitatively different conscious representations (one as of something red and one as of severe pain, say) subjective experiences which are had by the *same* subject for whom there is something that it is like to experience them. Putting it this way suggests that the property of subjectivity is closely related to the notion of the unity of experience. Since all current individual experiences make up one 'total state of consciousness' (Bayne and Chalmers, 2003; Bayne 2010), these two experiences share the same subjective character in virtue of being elements of this total state (even though they still have different qualitative characters). We will have a closer look at this option in the last section. The upshot of the discussion here is that it is questionable whether Tye's version of representationalism can provide an explanation of the subjective

character of phenomenal consciousness.<sup>9</sup> In the next section, we turn to another more recent attempt to explain subjective character in terms of non-conceptual content.

#### 4.2. *Does non-conceptual spatiotemporal structure explain subjectivity?*

In order to evaluate Hanna's claim it helps to introduce what I take to be an important distinction: We have to distinguish between (i) having a point of view and (ii) a mental representation's being something for me, since these two explananda allow for different answers. The reason why I necessarily perceive an object from this particular spatiotemporal location may be different from the reason why my conscious mental representations, i.e. my perceptions, feelings, thoughts etc. are something *for me* at all. In short, the spatiotemporal structure of perception that Hanna identifies with non-conceptual content may be responsible for our having a certain subjective point of view in relation to objects in our environment. But this does not automatically make it responsible for a mental representation's being something *for me* in the sense relevant for phenomenal consciousness. This becomes vivid when we consider again the bifurcation of two visual pathways for the processing of visual information. The dorsal stream is responsible not only for the guidance of action but also for the location of objects in the visual space in front of me. Since patients like D. F. can also still locate objects, her non-conceptual visual representations seem to be spatiotemporally structured and yet, these representations are not phenomenally conscious, not something *for her*. Having such a representation only results in the relevant automatic grasping action. Analogously, when the blindsight-patient correctly guesses that the object presented in his blind visual field is a horizontal line instead of a vertical line, then this representation is arguably spatiotemporally structured. The stimulus guessed correctly occupies a certain position in the patient's visual field resulting from the specific spatiotemporal standpoint and egocentric frame of reference that goes along with it. Yet there is nothing it is like for the patient to see the stimulus. It is not phenomenally conscious. Thus, Hanna's proposal that it is 'an animal's unique non-conceptual spatiotemporal perspective or "point of view" that constitutes the subjective character of its objective experience' (Hanna, 2005: p. 282) is just as affected by this empirical counter-example as Tye's proposal.

More generally, since it seems plausible that any kind of representational content, whether conceptual or non-conceptual, can be processed both consciously and unconsciously, we should not try to explain phenomenal character in terms of any kind of content at all, but instead try to single out and characterize a property that a mental state needs to possess in order for it to exhibit phenomenal character (see, Vosgerau

*et al.* 2008). More specifically, since not all my mental representations need be phenomenally conscious and thus need not be something *for me*, it is to be construed as a relational not an intrinsic property of a mental state or content. A likely candidate for the relevant kind of process conferring this property to a mental representation is some kind of integration. As I will explain in the next section, contrary to what Hanna claims, Kant provides just such a different account.

### 5. Kant on Me-ishness

Kant's account of subjectivity is embedded in his explanation of human cognition where he distinguishes different mental faculties in order to explain certain features of our conscious experience. For the present discussion, the relevant features are (i) the fact that conscious mental representations are 'mine' (i.e. they exhibit what Block calls 'me-ishness'), (ii) the fact that 'there is only *one* experience' (Kant, 1781/87: A110)<sup>10</sup> although my empirical consciousness is by itself 'dispersed' (B133) and (iii) the fact that I can be conscious of the identity of myself as subject. The first is exactly the problem with which we are concerned here. The second one is a kind of binding problem: how is it that my visual perception of the laptop in front of me, my auditory experience of my little daughter crying next door, my bodily sensation of my back pains etc. are not experienced in isolation, but rather as aspects of one single '*global representation*' (Brook, 1994: p. 82ff)? And how come that all these experiences present themselves self-referentially as experiences of one and the same subject, namely myself, a fact which I can also become conscious of: being the single and (synchronically as well as diachronically) identical subject of all these diverse experiences which together make up one. Kant arrives at his account of subjective character, i.e. of the condition(s) a mental representation has to meet in order to be something *for me*, by confronting these three puzzles at once. And contrary to what Hanna claims in the passage quoted earlier, the unity of consciousness figures prominently in this account.

Kant draws a two-step distinction between unconscious and conscious representations, and among the latter between merely subjective and objective representations:

The genus is representation in general (*repraesentatio*). Under it stands the representation with consciousness (*perceptio*). A *perception* that refers to the subject as a modification of its state is a sensation (*sensatio*); an objective perception is a cognition (*cognitio*). The latter is either an intuition or a concept (*intuitus vel conceptus*). (B376f)

Now, as for anyone, the question arises in virtue of what a mental representation is conscious. Kant's account derives from the famous passage at the beginning of the 'Deduction' of the categories where he claims, famously, that

the *I think* must *be able* to accompany all my representations; for otherwise something would be represented in me that could not be thought at all, which is as much as to say that the representation would either be impossible or else at least be nothing for me. (B131f)

Obviously, this is already Kant's answer to the first question above, since in this quote Kant formulates a condition that must be met by any mental representation in order for it to be something *for me*, that is, for it to be phenomenally conscious: If a mental representation does not meet this criterion that it must possibly be accompanied by the 'I think', then there is nothing it is like *for me* to have it, according to Kant. In the first quote above, Kant mentions two possible cases of representations, which do not meet this condition: a representation is impossible if it is self-contradictory, if it cannot be thought at all. For example, it is impossible for me to form a representation of a square circle. But a representation can also be *nothing for me* for other reasons, namely if it remains a *dark* representation because of adverse empirical circumstances, for example. So-called subliminal perceptions, as manifest in the blindsight patient, are good candidates for such representations. The blindsight patient's representations remain unconscious precisely because they cannot be accompanied by the 'I think' which is to say that they are not integrated into the unity of consciousness. Priming-phenomena (Marcel, 1983) demonstrate that such 'dark' representations are not a purely pathological matter. Indeed, in the *Anthropology* Kant says that the area of such unconscious mental representations is 'immense' (Kant, 1902, AA VII, §5, p. 135f), while the 'sole function' of the 'I think' is to 'introduce all thinking as belonging to consciousness' (A341/B399).<sup>11</sup> In sum, I take these quotes to provide ample reason to believe that this is Kant's account of me-ishness.

Importantly, this is equivalent to saying that the representation needs to be integrated into the unity of self-consciousness. So, subjective character is tied to the unity of experience, as revealed in a later passage:

The thought that ... representations given in intuition all together belong *to me* means ... the same as that I unite them in a self-consciousness, or at least can unite them therein ... i.e. only because I can comprehend their manifold in a consciousness [i.e.

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one global representation, T. S.] do I call them all together *my* representations; for otherwise I would have as multicolored, diverse a self as I have representations of which I am conscious. (B134)

The last sentence in this quote indicates how Kant intends to explain the third feature of conscious experience mentioned above: the (empirical) *consciousness of the identity of myself as subject*. I cannot become conscious of myself as the *identical* subject of my representations if I am conscious of these representations one by one, since even then my ‘empirical consciousness’ may remain utterly ‘dispersed and without relation to the identity of the subject’ (B133). Thus, this consciousness of being the identical single subject can only arise in the light of a regular *combination* of representations. And this is where the notion of ‘synthesis’ comes into play, since an active process is needed in order to produce a systematic arrangement either of sensual input into one complex representation or of different representations into one global representation, and this act of integration has to be performed by the understanding (by means of the imagination). This act of integration is needed because neither can such combinations be found among the sensual input, nor can it simply be presupposed that either the input or the representations arrange *themselves* in a regular fashion. And the crucial feature of this dynamical process is that it does not simply proceed associatively. This could still result in ‘unruly heaps’ (A121). Rather, the structuring of the input is in accordance with logical laws, which are provided by the categories of the understanding. This process of integration is crucial for Kant’s overall theory of cognition in more than one respect but this is not the place to elaborate this in more detail.

Due to the spontaneous act of synthesis, the ‘swarm of appearances’ which would otherwise ‘fill up our soul’ (A111) and produce as ‘multicoloured, diverse a self’ as there are representations, can be organized and structured (B134). Consequently, our experience is only *one* because all *my conscious* representations belong to (are integrated into) the same consciousness in virtue of an act of integration or binding performed by the subject’s power of understanding.<sup>12</sup> This integration into *one global state* also makes all *conscious* representations self-referential, which in turn enables me to become ‘conscious of the identical self in regard to the manifold of the representations that are given to me ... because I call them all together *my* representations, which constitute *one*’ (B135). In this way, the second and third feature mentioned above can be explained relying on the same single condition that is responsible for subjective character.

Now, when we have a closer look at this condition for me-ishness, we find that in contrast to the views just discussed in the previous sections

which attempt to explain subjective character in terms of non-conceptual content, Kant emphasizes over and over again that this condition on a conscious representation – integration – is ‘devoid of content’. It is a ‘simple and in content for itself wholly empty representation’ (A345f/B404). The accompaniment of the ‘I think’ is an act of integration into a unity, which depends for its application on sensual input, since ‘without any empirical representation, which provides the material for thinking, the act I think would not take place ...’ (B422n.). That is, neither does this act of integration produce any further content, nor does it alter the content provided by the sensual mechanisms. A given mental representation is conscious in virtue of belonging to a global representation which in turn makes up the ‘one experience’ that the subject has at all times (A110). Crucial for Kant’s critical theory and for his criticism of Descartes’ substance dualism is the implication that the subject is always merely given ‘along with (not in)’ conscious experiences (B161). Since the subject is not objectified when it has a conscious representation, we cannot intuit the self in virtue of being in a conscious state. The self-consciousness accompanying a conscious representation is merely a consciousness of oneself *as subject*, not as object.

Furthermore, Kant only claims that it has to be *possible* for the ‘I think’ to accompany all my representations. Neither does he claim that it always does so nor that it always has to. In order for a manifold of representations to ‘be my representations’, i.e. to be something *for me*, they have to ‘belong to a self-consciousness [...] (even if I am not conscious of them as such) [...]’ (B132). The bracketed phrase is crucial since it follows that the relevant form of self-awareness is merely pre-reflexive: Although a representation can only be something *for me* if I can in principle become conscious of myself as subject, it is not required that I *explicitly* do so. This is close to what Husserl called ‘non-thematic’ self-awareness (cf. Zahavi, 1999: Ch. 4). While we attend to the object of our conscious experience, we are non-thematically, peripherally aware of ourselves as subjects.

Now, is this account of me-ishness plausible and convincing? I am tempted to side with Hanna and others who object that it is ultimately too sophisticated because it over-intellectualizes the mind. Of course one has to bear in mind that for Kant, the crucial process of synthesis or integration can only be due to the transcendental unity of apperception, which is a necessary posit, not further analysable or explainable empirically. Notably, this is what makes Kant’s account non-naturalistic in character. Hanna (2005: p. 282) characterizes Kant’s condition as the ‘conceptual capacity for rationally self-conscious and proposition-based unification of a phenomenal manifold of sensory or representational content’. The problem is that Kant thinks that this unification amounts to a conceptual synthesis of the non-conceptual content of intuition. If a

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mental representation is only something for me if and only if intuitional content is brought under categories via spontaneous synthesis, then we are left with the problem that only adult human beings can have phenomenally conscious states. Non-human animals and human infants are excluded from the range of creatures for whom there is something it is like to experience their mental states since they plausibly lack these conceptual capacities. Although such a position may be conceptually coherent (pace Davidson), it is nevertheless not very persuasive since it flies in the face of evidence from cognitive ethology and is in conflict with phenomenological considerations too, e.g. ‘the everyday empathic experience of pet owners, animal trainers and zoo keepers’, as Hanna and Thompson (2003: p. 37) remind us. We would prefer an account according to which phenomenal consciousness is more widespread among the animal kingdom. That is the main reason why Kant’s solution seems unsatisfying, just like the higher-order thought theory as defended by Rosenthal (2004) is typically regarded as being too sophisticated.

Nevertheless, I think that – contrary to those who attempt to explain the subjectivity of consciousness in terms of content, Kant was on the right track since he tried to introduce a relational property that a contentful representation may either possess or lack. The challenge for us today is to formulate the condition in a less sophisticated way, and I think that there are some worthwhile proposals. We can take his central idea of integration as it was sketched above and develop it further using contemporary philosophical and empirical accounts. This is the topic of the last section.

## 6. Me-ishness and Integration

### 6.1. *Higher-Order Global States – HOGS*

A contemporary theory close to Kant’s account is Robert Van Gulick’s (2004, 2006) so-called ‘HOGS’ model (short for ‘Higher Order Global States’), developed as an alternative to self-representationalism (Kriegel, 2009) and to the classical higher-order theories (Carruthers, 2000; Rosenthal, 2004). It retains the link between consciousness and self-awareness postulated by these accounts and emphasizes ‘phenomenal unity’ as an important feature of consciousness while it drops the essential feature of competing higher-order accounts, namely invoking a second mental state:

The basic idea is that lower-order object states become conscious by being incorporated as components into the higher-order global states (HOGS) that are the neural and functional substrates of conscious self-awareness. The transformation from unconscious to



conscious state is not a matter of merely directing a separate and distinct meta-state onto the lower-order state but of “recruiting” it into the globally integrated state that is the momentary realization of the agent’s shifting transient conscious awareness. (Van Gulick, 2004: p. 76f.)

In other words, ‘transforming a nonconscious state into a conscious one is a process of *recruiting* it into a *globally integrated complex* whose organization and intentional content embodies a heightened degree of *reflexive self-awareness*’ (Van Gulick, 2006: p. 24).<sup>13</sup> That is, a mental representation is phenomenally conscious because it is an element (or rather a modification) of the complex (or cluster) forming the *single global representation* or momentary ‘total state of consciousness’ (Bayne and Chalmers, 2003) of a subject interacting with her environment. On this view (as in Kant’s view above), the process of integration or recruitment into a global state explains why a single representation is something for the subject. A representation not integrated in this way, like the visual representation of the blindsight-patient, remains unconscious. The central idea is that the conscious experiencing self enjoys one unified global mental representation, which is made up of many elements, some of which are stable and invariant, while others are constantly changing in virtue of the interaction of the whole organism with objects and events in the environment. In contrast to the higher-order thought theory, no additional representation is required. Nor is there a need to posit a further kind of content as in the accounts by Carruthers (2000) or Kriegel (2009). One may wonder why Van Gulick’s model is still called ‘higher-order’, since it rejects the postulation of a separate and distinct representation. This has to do with the functional role of a mental representation. According to Van Gulick, being integrated modifies a first-order content in such a way that its impact on other representations in the cluster (which together influence the subject’s behavioral output) increases enormously. This feature stands in contrast to the Kantian model on which the integration of a representation does not alter its content.<sup>14</sup> As mentioned above, accompaniment by the ‘I think’ does not modify the content of the individual representation.

Still, the HOGS-model can avoid several problems arising for representationalist accounts (like Tye’s and Hanna’s) because of their focus on some kind of representational content as making the difference between conscious and unconscious mental representations. For example, it avoids cases of misrepresentation and targetless states – a problem raised against first-order as well as higher-order representationalism (Byrne, 1997; Neander, 1998). A further virtue is that the HOGS theory can accommodate the observations that (a) any single mental

representation is always only a modification of the already conscious overall state of an experiencing organism, and that (b) it seems to be possible for any content to be processed consciously or unconsciously, while there is not any one particular content that is essentially conscious. It is a virtue of this parsimonious theory that it tries to make do with the idea of integration, or recruitment – a condition which seems to be needed anyway in order to explain phenomenal unity. What is more, Van Gulick's use of integration is not transcendental in Kant's sense but more in the spirit of functionalism. That is, integration is a process that can be characterized in purely functional terms and can in principle be realized by mechanisms that in turn can be characterized in naturalistic terms. For example, the function of integration could in principle be realized or implemented by neural mechanisms in the brain. Thus, I would like to mention three popular empirical accounts which may be able to support this general idea empirically (to the extent that these models themselves are derived from empirical evidence).

#### 6.2. *Support from Empirical Accounts*

Gerald Edelman and Giulio Tononi (2000) postulate a globally integrated state as the substrate of consciousness and subjectivity. The central notion in their account is a functional cluster of neuronal assemblies, which they call the 'dynamic core', a stable yet transient subpopulation of neurons maintaining more and stronger interactions with each other than with the rest of the brain for a short period of time (via long-range connections). This dynamic core is in constant change, since no fixed set of neurons contributes to it; any neural assembly can be incorporated into it, while others leave it. According to Edelman and Tononi, such a functional cluster is capable of yielding global states, which exhibit both differentiation of information and unity. Information being integrated in this way 'acquires a new potential – the possibility of subjectivity. It is information "for somebody"; in short, it becomes consciousness itself' (2000: p. 212). The similarities to Van Gulick's account are striking. Tononi has developed this theory further into what he has called the 'information integration theory of consciousness' (Tononi 2004). According to this view, consciousness is integrated information where the quantity of consciousness (being fully alert vs. being comatose or dreaming) corresponds to the amount of integrated information generated by a complex of elements.

This dynamic core underlying the *one globally unified* (integrated) conscious experience of the subject is analogous to Damasio's (1999, 2011) notion of a network encompassing (i) so-called 'proto-self'-structures (in particular, certain brainstem nuclei and other subcortical structures), (ii) object representations, and (iii) the representation of their relation (Damasio, 1999: p. 174). Damasio criticizes the general

neglect of the *self* and the ‘elimination of self-reference’ in Crick and Koch’s account, for example (see Crick, 1994), since this may ‘create a barrier to the comprehensive solution of the problem of consciousness’ (Damasio, 1999: p. 345). Instead, he aims at a theory of ‘the emergence of the “movie-in-the-brain” as well as of an observer for the movie *within the movie*’ (1999: p. 9ff). The central concept in his account of the ‘sense of self’ accompanying a conscious experience (its subjective character) is his notion of the *proto-self*, a collection of interconnected subcortical structures (e.g. brain-stem nuclei, hypothalamus, basal fore-brain), which he considers to be the non-conscious ‘biological forerunner for what eventually becomes the elusive sense of self’. These structures can be understood as a ‘model of the body-in-the-brain’. Since they serve the homeostatic function of representing, monitoring, and regulating the organism’s bodily state *for* the organism ‘within the narrow range and relative stability required for survival’, this overall representation of the body provides for a single reference point, a ‘haven of stability’ (Damasio 1999: pp. 142, 153ff) and invariance. Interactions of the organism with objects in the environment ‘perturb’ this balance wherefore the brain initiates appropriate physiological reactions, such that the organism as well as its brain are in a constant (yet minimal) ‘biophysical flux’ despite this relative stability and invariance which is thereby maintained (cf. Rudrauf and Damasio, 2006: pp. 437–42). In this way, Damasio’s proposal is the ideal supplement to Edelman and Tononi’s notion of a dynamic core that is in constant change, because the ‘proto-self’-structures may provide the basis for the self-referential character of ‘my’ conscious representations. The global conscious state must contain such an invariant element in order to explain this. What is represented in these structures is the homeodynamic state of the whole organism *for the organism*. Damasio holds that a given object representation becomes conscious if its neural substrate is integrated into a global representation with the neural structures that form the proto-self. This integration is supposed to be brought about in a dynamic process of integration in so-called ‘convergence zones’, located mostly in higher-order cortices such as the thalamus. If all these structures are integrated into one complex global state, then consciousness with a ‘sense of self in the act of knowing’ is supposed to emerge, on Damasio’s account (1999: p. 168ff). The resulting global state of neural activation is the transient substrate of the conscious experience of a subject during sensorimotor interaction with the environment. This simplest kind of consciousness is called *core consciousness* (Damasio, 1999: pp. 16ff). It provides a creature with a sense of the here and now; the corresponding sense of self is called *core self*. It emerges as a transient entity, re-created like pulses for each and every conscious object representation. But nevertheless these representations are self-referential with respect to one and the same invariant

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reference point, the subject, in virtue of being integrated with the proto-self-structures. Core consciousness in turn provides the foundation for an *extended consciousness*, which is more complex and comes in different degrees. Damasio arrives at this distinction on the basis of his clinical investigations of pathological cases, in which sometimes extended consciousness may be lost while core consciousness remains unimpaired. A notable feature of Damasio's account is the emphasis on the body of the experiencing organism. It is not only the brain that matters for consciousness and cognition but the whole organism embedded in its environment, a view that has gained some prominence in recent cognitive science (Noë, 2004, 2009; Thompson, 2007, Clark, 2008; Hanna, 2009).

Without needing to elaborate these empirical accounts any further, it should be obvious by now that they all point in the same general direction. And while they cannot function as empirical evidence in the strict sense, they nevertheless support the spirit of Van Gulick's general philosophical model sketched above. While of course, many aspects of this approach to subjectivity have to be developed in much greater detail, the general message of this discussion is that the notion of integration is not only well-suited to explain how a single mental state can be an element of one unified global experience, but can also account for this state's being something for the subject of experience. This was elaborated in more detail with respect to Kant's theory in section 5. The discussion of the empirical models in this section was supposed to show that empirical evidence from various sources points in the direction of such an account. As a corollary, if the neural substrate underlying this global representation contains proto-self-structures exhibiting both invariance and stability, then this may also explain the sense of a single abiding subject.

### Conclusion

The topic of this paper was the subjective character or me-ishness of conscious experiences. I argued against theories which attempt to explain this in terms of content, and more specifically, non-conceptual content, however specified.<sup>15</sup> The discussion focused on Tye's PANIC theory and Hanna's more recent suggestion that the non-conceptual spatiotemporal structure of experience may explain the relevant first-person me-ishness. The objection against these views was based primarily on an empirical counterexample. Note that this objection does not undermine the viability of Hanna's otherwise adequate reconstruction of Kant's notion of non-conceptual content in terms of spatiotemporal structure. This remains a very valuable contribution to the contemporary debates about non-conceptual content since it may be able to solve the unity problem associated with the notion of non-conceptual content, and to provide an explanation of the perspectival character of perception. But it does *not*

at the same time provide us with an explanation of the subjective character of consciousness, or so I claim. In the second part of the article I aimed to show that contrary to Hanna's claim Kant does not attempt to explain subjectivity in terms of content. On the contrary, based on relevant passages from Kant's first *Critique*, I argued that the central notion in Kant's account of the subjective character of phenomenal consciousness is the unity of consciousness and a process of integration or synthesis which makes all the difference between those mental representations that are something *for me* and those which are not. Despite the fact that, as it stands, Kant's account seems to be too sophisticated, depriving too many animals (and even human infants) of phenomenally conscious representations, it nevertheless points in the right direction and can be developed further, promising to lead to a satisfying philosophical account. Van Gulick's HOGS-model proved to be a contemporary position, which is similar in important respects, and I have indicated that it is also supported by several empirical models.<sup>16</sup>

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#### Notes

- 1 To say that a creature is conscious *simpliciter* is also a way of saying that it is awake or alert. A creature may be in any one of a hierarchy of different states of vigilance, like being fully alert, being in a dreamless sleep, or being in a vegetative state, in coma, or drowsy or anaesthetized (Dehaene *et al.*, 2006). In contrast to phenomenal consciousness, this notion of consciousness only applies to creatures, not to states.
- 2 Here, object is understood in a broad sense. Following Crane (2001), the term 'intentional object' just provides an answer to the question what a certain mental state is about.
- 3 For an overview of the recent debate see Metzinger (2000).
- 4 All other differences between normally sighted people and blindsight-patients that he mentions have to do with the content of the representation.
- 5 Carruthers (2000: p. 157ff) works out the following argument in greater detail.
- 6 Jacob and Jeannerod (2003) present evidence that one cannot simply identify ventral stream processing with conscious and dorsal stream processing with unconscious representations, since some patients with a damaged dorsal pathway still weren't phenomenally conscious of what they 'saw' (based on their unimpaired ventral pathway processing).
- 7 Although D. F. of course consciously posts the letter in the slot, it is counter-intuitive to suppose that D. F. is phenomenally conscious of the representation guiding her grasping action. As Kelly (2002) observes, she 'can't draw the slope of the slot on a piece of paper or even rotate her hand into the correct orientation without at the same time moving it toward the slot. She seems, in other words, not to be able to represent the orientation of the slot at all except by means of posting the card through it'. Based on D. F.'s case, Kelly claims, 'that motor intentional activities constitute essentially bodily understandings of their objects'.

- 8 Cf. Horgan and Tienson (2002). Tye's claim that there is nothing it is like to have a belief shows that he does not make the distinction, proposed by Kriegel and others, between qualitative and subjective character. But the representationalist should in general also allow for phenomenally conscious *conceptual* mental representations. I can consciously perceive a triangle *as* a triangle, say. But in order to be able to be in this perceptual state, I need to possess the concept 'triangle'. This makes the perceptual state partly conceptual.
- 9 See Byrne (2001a, 2003) for further discussion of Tye's theory with regard to his use of the notion of non-conceptual content.
- 10 References in the text are to Kant (1781/1787), A signifying the first edition, B the second.
- 11 'Es dient dazu, alles Denken als zum Bewusstsein gehörig aufzuführen.'
- 12 In his 2005 paper, Hanna discusses split-brain patients as providing evidence against the unity of consciousness as a condition of phenomenal consciousness. He thinks that these patients show that it is fragile and can break down easily. In these patients, the corpus callosum is cut such that the main connection between the two hemispheres is severed, resulting in largely independent information processing in the two hemispheres. Due to lateralization, information presented in the right visual field is processed in the left hemisphere and vice versa. After the information-flow is interrupted, most mental representations are computed 'intra-hemispherically' (Colvin and Gazzaniga, 2006: p. 182) such that neither hemisphere receives the information processed in the other. That's the reason why Hanna thinks these patients show that the unity of consciousness is a 'fragile achievement'. However, the view put forward here can accommodate the split-brain behaviour quite nicely, once we acknowledge that the disconnection of the hemispheres may make an integration of the relevant representations processed in the right hemisphere impossible such that they remain unconscious. Bayne (2008) has argued persuasively that we do not need to treat this phenomenon as a breakdown of the unity of consciousness or invoke two centers of consciousness (Pucetti, 1981; for criticism see also Schlicht, 2007).
- 13 Though pointing in the right direction, one may still be dissatisfied with Van Gulick's claim in the quotation above that the relevant sense of self-awareness should be *reflexive*. As far as I can see neither he nor any other defender of a higher-order theory has argued for this claim. On the other hand, there is a rich tradition arguing that the notion of reflection simply cannot capture the very basic sense of self-consciousness. For various reasons, other authors, including Kant and Husserl, have characterized the relevant form of self-consciousness as *pre-reflexive*. Extensive arguments to this effect have been put forward in contemporary debates, this is not the place to pursue this problem any further (Zahavi, 1999, Schlicht, 2007, Gallagher and Zahavi, 2008: pp. 45–68). Metzinger (1995) already pointed out that integration of content into a global state is an important feature of conscious experience.
- 14 Thus the analogy to Kant's theory only goes so far, since not only the empirical models but also Van Gulick's HOGS-model are supposed to be naturalistic accounts, while Kant's isn't. The purpose here was merely to clarify Kant's general idea and make productive use of it in an original modified model.
- 15 A more elaborate argument against attempts to explain phenomenal consciousness in terms of content can be found in Vosgerau *et al.*, 2008.
- 16 I would like to thank Ned Block, Kristina Engelhard, Dietmar Heidemann, Thomas Metzinger and Robert Van Gulick for various valuable discussions.



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